

**Notice of Allowability**

Application No.

10/064,398

Applicant(s)

FORLENZA ET AL.

Examiner

JAMES C. KERVEROS

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2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to AMENDMENT After Final filed 6/28/2005.
2. ☒ The allowed claim(s) is/are 7-11 and 15, Renumbered as Claims 1-6.
3. ☒ The drawings filed on 27 August 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                              |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|   | 9. <input type="checkbox"/> Other _____   |

  
**GUY LAMARRE**  
**PRIMARY EXAMINER**

### **DETAILED ACTION**

This is a Notice of Allowance in response to AMENDMENT After Final filed 6/28/2005.

Claims 7-11 and 15 were previously allowed in the prior Office Action.

Claims 1- 6 and 12-14 have been cancelled.

#### ***Allowable Subject Matter***

Claims 7-11 and 15 are allowed. Renumbered as Claims 1-6.

### **REASONS FOR ALLOWANCE**

The following is an examiner's statement of reasons for allowance:

The prior arts of record taken alone or in combination fail to teach, anticipate, suggest or render obvious the claimed invention, including the claimed features, recited, inter alia, as follows:

Independent claim 7, recites, inter alia, the claimed features of unloading the values of all the latches from the scan chain before the identified failing latch, generating a load from the unloaded values of all the latches from the scan chain before the identified failing latch, applying the generated Load as the first event of an LSSD deterministic pattern by using the same identical primary inputs and clocks that produced the failure in the failing latch in the first semiconductor device to the second semiconductor correctly operating device using a bootstrap technique.

Similarly, independent claim 10 recites, inter alia, the claimed features of observing the states of the logic circuit containing the failed latch by unloading the

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values of the plurality of latches from the LSSD scan chain positioned in the scan chain before the identified failing latch which includes reading any embedded circuit memories and other circuit storage elements positioned in the scan chain before the identified failing latch, generating a load from the unloaded states of the latches positioned in the scan chain before the failed latch, applying the generated Load as the first event of a newly created independent LSSD deterministic pattern by using the primary inputs and clock signals identical to the primary inputs and clock signals that produced the failure to a known correctly operating device utilizing logic circuits formed of a plurality of latches arranged in LSSD scan chain and a plurality of other circuit storage elements identical to the failed device by applying a plurality of primary inputs and clock signals to the device by using a bootstrap technique.

Consequently, independent claims 7 and 10 are allowed over the prior arts of record. Claims 8, 9 and 15 are directly or indirectly depended upon claim 7, and therefore are allowable, and claim 11 is depended upon claim 10, and therefore is also allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES C. KERVEROS whose telephone number is (571) 272-3824. The examiner can normally be reached on 9:00 AM TO 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Date: 20 July 2005  
Office Action: Allowance

JAMES C KERVEROS  
Examiner  
Art Unit 2133

By: 

  
GUY LAMARRE  
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